## Claims

[c1] 1.A radiation detector element assembly, comprising:
a scintillator and a photo sensor, said scintillator including a first surface proximate to a photo sensor and a second surface distal to said first surface and receptive to a radiation beam; and
a side portion of said scintillator configured to intercept impingement of a radiation beam thereon and reduce a response of said photo sensor to said impingement on said side portion.

[c2] 2. The radiation detector element of Claim 1 wherein said second surface is only on said second surface configured to be larger than said first surface such that part of said radiation beam impinges and reduces a response of said photo sensor to said impingement.

[c3] 3.The radiation detector element of Claim 1 wherein said radiation beam is an x-ray beam.

[c4] 4. The radiation detector element of Claim 1 wherein said side portion includes a flange.

[c5] 5. The radiation detector element of Claim 4 wherein said flange is configured with a thickness and depth to intercept said radiation beam for a selected focal spot motion.

[c6] 6. The radiation detector element of Claim 1 wherein said side portion is tapered outward from said first surface to said second surface.

[c7] 7. The radiation detector element of Claim 1 wherein said scintillator is tapered outwards using step cutting from said second surface to said first surface such that said radiation beam does not impinge on another side portion, in the vicinity of said photo sensor, for a selected range of focal spot motion.

[c8] 8. The radiation detector element of Claim 7 wherein a size of said scintillator at said first surface is defined by a range of focal spot motion.

[c9] 9. A method of detecting an incident radiation beam comprising:

receiving a radiation beam incident upon a second surface of a scintillator, said scintillator including a first surface proximate to a photo sensor and a second surface distal to said first surface; and

intercepting impingement of a radiation beam with a side portion of said scintillator, said side portion of said scintillator configured to reduce response of said photo sensor to said impingement on said side portion.

[c10] 10. The method of Claim 9 wherein said second surface is configured to be larger than said first surface such that part of said radiation beam impinges only on said second surface and reduces response of said photo sensor to said inpingement.

[c11] 11.The method of Claim 9 wherein said radiation beam is an x-ray beam.

[c12] 12. The method of Claim 9 wherein said side portion includes a flange.

[c13] 13. The method of Claim 12 wherein said flange is configured with a thickness and depth to intercept said radiation beam for a selected focal spot motion.

[c14] 14. The method of Claim 9 wherein said side portion is tapered outward from said first surface to said second surface.

[c15] 15. The method of Claim 9 wherein said scintillator is tapered outwards using step cutting from said second surface to said first surface such that said radiation beam does not impinge on another side portion, in the vicinity of said photo sensor, for a selected range of focal spot motion.

[c16] 16. The method of Claim 15 wherein a size of said scintillator at said first surface is defined by a range of focal spot motion.

[c17] 17. A radiation detector array for use in imaging systems, comprising:

a scintillator array disposed in an operable configuration with a photo sensor array, said scintillator array including a plurality of scintillators and said photo sensor array including a plurality of photo sensors;

each scintillator of said plurality of scintillators including a first surface proximate to a photo sensor of said plurality of photo sensors and a second surface distal to said first surface and receptive to a radiation beam; and

a side portion of said each scintillator configured to intercept impingement of a radiation beam thereon and reduce a response of said each respective photo sensor to said impingement on said side portion.

[c18] 18. A means for detecting an incident radiation beam comprising:
means for receiving a radiation beam incident upon a second surface of a scintillator, said scintillator including a first surface proximate to a photo sensor and a second surface distal to said first surface; and
means for intercepting impingement of a radiation beam with a side portion of said scintillator, said side portion of said scintillator configured to reduce a response of said photo sensor to said impingement on said side portion.

[c19] 19. The means for detecting an incident radiation beam of Claim 18 wherein said second surface is configured to be larger than said first surface such that part of said radiation beam impinges only on said second surface and reduces response of said photo sensor to said impingement.

[c20] 20.The means for detecting an incident radiation beam of Claim 18 wherein said radiation beam is an x-ray beam.

[c21] 21. The means for detecting an incident radiation beam of Claim 18 wherein said side portion includes a flange.

[c22] 22. The means for detecting an incident radiation beam of Claim 21 wherein said flange is configured with a thickness and depth to intercept said radiation beam for a selected focal spot motion.

[c23] 23. The means for detecting an incident radiation beam of Claim 18 wherein said side portion is tapered outward from said first surface to said second surface.

[c24] 24. The means for detecting an incident radiation beam of Claim 18 wherein said scintillator is tapered outwards using step cutting from said second surface to said first surface such that said radiation beam does not impinge on another side portion, in the vicinity of said photo sensor, for a selected range of focal spot motion.

[c25] 25. The means for detecting an incident radiation beam of Claim 24 wherein a size of said scintillator at said first surface is defined by a range of focal spot motion.